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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/714,841	11/18/2003	Terunori Kondo	NS-US035108	3140

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EXAMINER	
TRAN, BINH Q	

ART UNIT	PAPER NUMBER
3748	

DATE MAILED: 03/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	10/714,841	KONDO ET AL.
	Examiner	Art Unit
	BINH Q. TRAN	3748

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-20 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1-20 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date 02/19/04; 04/05/04.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
> (e) the invention was described in-
> (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effect under this subsection of a national application published under section 122(b) only if the international application designating the United States was published under Article 21(2)(a) of such treaty in the English language; or
> (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that a patent shall not be deemed filed in the United States for the purposes of this subsection based on the filing of an international application filed under the treaty defined in section 351(a).

Claims 1-20 are rejected under 35 U.S.C. 102 (b) as being anticipated by Shinzawa et al. (Shinzawa) (Patent Number 5,319,930).

Regarding claims 1, 12, and 20, Shinzawa discloses a particulate filter (3) regenerating device comprising: a regeneration timing determining section configured to determine a regeneration timing to initiate regeneration of a particulate filter by combusting particulate matter that has accumulated in the particulate filter at least when the exhaust gas temperature is equal to or greater than a prescribed temperature (e.g. See col. 12, lines 20-67; col. 13, lines 1-67; col. 14, lines 1-47); and a regeneration control section configured to execute control to combust particulate matter based on the regeneration timing determined by the regeneration timing determining section (e.g. See col. 8, lines 12-67; col. 12, lines 20-67; col. 13, lines 1-67; col. 14, lines 1-47).

Regarding claims 2, and 16, Shinzawa further discloses that the regeneration timing determining section includes an accumulated particulate quantity section configured to detect the quantity of particulate matter that has accumulated within the particulate filter, and the regeneration timing determining section is further configured to determine the regeneration timing to regenerate the particulate filter when either the accumulated particulate quantity reaches a prescribed quantity, or the accumulated particulate quantity is less than the prescribed quantity and the exhaust gas temperature is equal to or greater than the prescribed temperature (e.g. See col. 9, lines 25-67; col. 10, lines 1-55).

Regarding claims 3, and 17, Shinzawa further discloses that the regeneration timing determining section includes an accumulated particulate quantity section configured to detect the quantity of particulate matter that has accumulated within the particulate filter, and the regeneration timing determining section is further configured to determine the regeneration timing to regenerate the particulate filter when either the accumulated particulate quantity reaches a first prescribed quantity, or the accumulated particulate quantity reaches a second prescribed quantity that is smaller than the first prescribed quantity and the exhaust gas temperature is equal to or greater than the prescribed temperature (e.g. See col. 9, lines 25-67; col. 10, lines 1-55).

Regarding claims 4, and 18, Shinzawa further discloses that the regeneration timing determining section includes an accumulated particulate quantity section configured to detect the quantity of particulate matter that has accumulated within the particulate filter, and the regeneration timing determining section is further configured to determine the regeneration timing to regenerate the particulate filter when either the accumulated particulate quantity

reaches a prescribed quantity, or the exhaust gas (e.g. See col. 9, lines 25-67; col. 10, lines 1-67; col. 11, lines 1-67).

Regarding claims 5 and 19, Shinzawa further discloses that the regeneration timing determining section includes an accumulated particulate quantity section configured to detect the quantity of particulate matter that has accumulated within the particulate filter, and the regeneration timing determining section is further configured to determine the regeneration timing to regenerate the particulate filter when either the accumulated particulate quantity reaches a prescribed quantity, or the exhaust gas temperature is equal to or greater than the prescribed temperature after a prescribed travel distance has been reached (e.g. See col. 9, lines 25-67; col. 10, lines 1-67; col. 11, lines 1-67).

Regarding claim 6, Shinzawa further discloses that the regeneration timing determining section includes an accumulated particulate quantity section configured to detect the quantity of particulate matter that has accumulated within the particulate filter, and the regeneration timing determining section is further configured to determine the regeneration timing to regenerate the particulate filter when either the accumulated particulate quantity reaches a prescribed quantity, or a first prescribed travel distance has been reached (e.g. See col. 17, lines 21-67; col. 18, lines 1-67; col. 19, lines 1-65).

Regarding claim 7, Shinzawa further discloses that the regeneration timing determining section is further configured to determine the regeneration timing to regenerate the particulate filter when a second prescribed travel distance has been reached that is smaller than the first prescribed travel distance and the exhaust gas temperature is equal to or greater than the prescribed temperature (e.g. See col. 17, lines 21-67; col. 18, lines 1-67; col. 19, lines 1-65).

Regarding claim 8, Shinzawa further discloses that the regeneration control section is further configured to execute control of at least one regeneration control device to raise the temperature of the exhaust gas above the temperature that would normally exist (e.g. See col. 9, lines 25-67; col. 10, lines 1-67; col. 11, lines 1-67).

Regarding claims 9, and 13, Shinzawa further discloses that the regeneration timing determining section includes a sensor (32, 33) that detects the exhaust gas temperature upstream of the particulate filter (e.g. See col. 7, lines 59-67; col. 8, lines 1-67).

Regarding claims 10, and 14, Shinzawa further discloses that the regeneration timing determining section is configured to determine that the exhaust gas temperature is equal to or greater than the prescribed temperature based on the vehicle speed in order to regenerate the particulate filter (e.g. See col. 8, lines 11-67; col. 9, lines 1-23).

Regarding claims 11, and 15, Shinzawa further discloses that the regeneration timing determining section is configured to determine that the exhaust gas temperature is equal to or greater than the prescribed temperature based on at least one operating condition of the engine in order to regenerate the particulate filter (e.g. See col. 8, lines 11-67; col. 9, lines 1-23).

Prior Art

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure and consists of four patents:

Kawashima et al. (Patent Number 6851258), Tonetti et al. (Patent Number 6666020), Carberry et al. (Patent Number 6497095), and Taniguchi et al. (Patent Number 5716586) all discloses an exhaust gas purification for use with an internal combustion engine.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Binh Tran whose telephone number is (571) 272-4865. The examiner can normally be reached on Monday-Friday from 8:30 a.m. to 5:00 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas E. Denion, can be reach on (571) 272-4859. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9306 for regular communications and for After Final communications.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

BT
March 18, 2005

Binh Q. Tran
Patent Examiner
Art Unit 3748